3D Blaster Savage4

User Guide
On-line Version

Declaration of Conformity

According to the FCC96 208 and ET95-19 documents,

Name: *Creative Labs Inc.*

Address: *1901 McCarthy Boulevard*
                Milpitas, CA. 95035
                United States
                Tel: (408) 428-6600

declares under its sole responsibility that the product

Trade Name: *Creative Labs*

Model Number: *CT6901/CT6903*

has been tested according to the FCC / CISPR22/85 requirements for Class B devices and found compliant with the following standards:

EMI/EMC:ANSI C63.4 1992, FCC Part 15 Subpart B

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

   1. This device may not cause harmful interference, and
   2. This device must accept any interference received, including interference that may cause undesirable operation.

Ce matériel est conforme à la section 15 des régles FCC. Son Fonctionnement est soumis aux deux conditions suivantes:

   1. Le matériel ne peut être source D'interférences et
   2. Doit accepter toutes les interférences reques, Y compris celles pouvant provoquer un fonctionnement indésirable.

Supplementary Information:
CT6901 is AGP interface with 32 MB SDRAM;
CT6903 is AGKP interface with 8 MB SDRAM

Compliance Manager
Creative Labs, Inc.
February 25, 1998

Declaration of Conformity

According to the FCC96 208 and ET95-19 documents,

Name: *Creative Labs Inc.*

Address: *1901 McCarthy Boulevard*
                Milpitas, CA. 95035
                United States
                Tel: (408) 428-6600

declares under its sole responsibility that the product

Trade Name: *Creative Labs*

Model Number: *CT6851*

has been tested according to the FCC / CISPR22/85 requirements for Class B devices and found compliant with the following standards:

EMI/EMC:ANSI C63.4 1992, FCC Part 15 Subpart B

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

   1. This device may not cause harmful interference, and
   2. This device must accept any interference received, including interference that may cause undesirable operation.

Ce matériel est conforme à la section 15 des régles FCC. Son Fonctionnement est soumis aux deux conditions suivantes:

   1. Le matériel ne peut être source D'interférences et
   2. Doit accepter toutes les interférences reques, Y compris celles pouvant provoquer un fonctionnement indésirable.

Supplementary Information:
CT6851 is PCI interface with 32 MB SDRAM

Compliance Manager
Creative Labs, Inc.
April 1, 1998

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Safety and Regulatory Information
The following sections contain notices for various countries:

Safety Information

CAUTION: This device is intended to be installed by the user in a CSA/TUV/UL certified/listed IBM AT or compatible personal computers in the manufacturer's defined operator access area. Check the equipment operating/installation manual and/or with the equipment manufacturer to verify/confirm if your equipment is suitable for user-installed application cards.

ATTENTION: Ce carte est destiné à être installé par l'utilisateur, dans un ordinateur compatible certifié CSA/TUV/UL ou listé IBM AT, à l'intérieur de la zone définie par le fabricant. Consulter le mode d'emploi ou le fabricant de l'appareil pour vérifier ou confirmer si l'utilisateur peut y installer lui-même des cartes périphériques.

Notice for the USA

FCC Part 15: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, this notice is not a guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try one or more of the following measures:

❑ Reorient or relocate the receiving antenna.

❑ Increase the distance between the equipment and receiver.

❑ Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

❑ Consult the dealer or an experienced radio/TV technician.

CAUTION: To comply with the limits for the Class B digital device, pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class B limits.

All cables used to connect the computer and peripherals must be shielded and grounded. Operation with non-certified computers or non-shielded cables may result in interference to radio or television reception.

Modifications

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

Notice for Canada

This apparatus complies with the Class "B" limits for radio interference as specified in the Canadian Department of Communications Radio Interference Regulations.

Cet appareil est conforme aux normes de CLASSE "B" d'interférence radio tel que spécifié par le Ministère Canadien des Communications dans les règlements d'interférence radio.

Compliance

This product conforms to the following Council Directive:

❑ Directive 89/336/EEC, 92/31/EEC (EMC)

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3D Blaster Savage4

Installation Guide

</div>

Contents

Introduction

Congratulations on your selection of Creative's 3D Blaster® Savage4™!

3D Blaster Savage4 is an integrated 2D/3D/video accelerator card suitable for general-purpose graphics applications including word processing, Web navigation, digital imaging, and games.

3D Blaster Savage4 uses S3's Savage4 128-bit graphics controller. The Savage4 is a dual-pipeline engine capable of processing and combining two textures simultaneously. This gives software developers the ability to create realistic real-time visual effects such as bump mapping, environmental mapping, and dual texturing. These features are important not only for the latest games, but also for the more sophisticated user interfaces that are becoming more common in business applications.

Serial and Model Numbers

The model number of your graphics card can be found on the face of the card; the serial number can be found on a label attached to the back of the card. Record the serial and model numbers below. This information will be useful in the event that you need to contact our Technical Support staff for troubleshooting or your dealer for warranty service.

Hardware	Product Codes	Numbers
3D Blaster Savage4	Serial Number	
	Model Number	

Before You Begin

The README file on the CD-ROM contains information not available at the time of printing. Read the file before you continue.

Minimum System Requirements

❑ IBM® PC or 100% compatible

❑ PCI Version: Intel Pentium™, Pentium Pro, Pentium II, or Pentium III processor; AMD K6, K6-2, or K7 processor running at 90MHz or higher

❑ AGP Version: Pentium II or Pentium III processor; AMD K6-2 or K7 running at 200 MHz

❑ 16 MB RAM

❑ 15 MB free hard disk space

❑ PCI Version: One available PCI 2.1 bus slot

❑ AGP Version: AGP 1.0 or 2.0 bus slot

❑ VGA monitor

❑ CD-ROM drive

❑ Windows 95 (for AGP, OSR2 or later with USB supplement) or Windows 98 or Windows NT 4.0

Updating Drivers

To download the latest Savage4 drivers, visit Creative's Web site (refer to the *Technical Support* leaflet for details).

Preliminary step for Windows 95 users

Windows 95 automatically detects new hardware and starts the software installation procedure upon startup. Before you begin installation, verify your Windows version number before installing the graphics card.
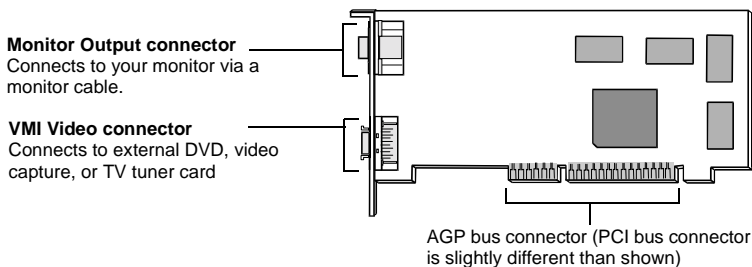
To verify your Windows 95 version number:

1. Click on Start on the Taskbar, select Settings, and click on Control Panel.

2. In the Control Panel window, double-click the System icon. Your Windows 95 version number is displayed on the General tab page of the Systems Properties dialog.

3. Note the version number. The following are the Windows 95 version numbers:

❑ 4.00.950 (Retail version)

❑ 4.00.950A (Retail version)

❑ 4.00.950B (OSR version 2 and 2.1)

❑ 4.00.950C (OSR version 2.5)

> Check the appropriate box should you need to refer to the Windows' version number during the software installation process.

Installing Your Graphics Card

Monitor Output connector
Connects to your monitor via a monitor cable.

VMI Video connector
Connects to external DVD, video capture, or TV tuner card

AGP bus connector (PCI bus connector is slightly different than shown)

To install the graphics card

If you are replacing an existing VGA card with 3D Blaster Savage4, remove the existing VGA card and its software and drivers.

1. Turn off the power to your computer and all connected devices.
2. Disconnect the power cord from the outlet.
3. Touch a metallic surface on your computer to discharge any static electricity.
4. Remove the computer cover.
5. Locate a free AGP or PCI expansion slot.
   For Savage4 (PCI), use PCI slot 1 for best performance and compatibility. The figure to the right show the various types of expansion slots.
6. Remove the metal plate covering the slot. Keep the screw and metal plate for future use.
7. Align the bus connector of the graphics card with the slot.
8. Press the card's bus connector evenly into the slot—the bus connector must make full contact with the slot.
   WARNING: Do not force the graphics card into place. If it does not fit properly, remove it and try again.
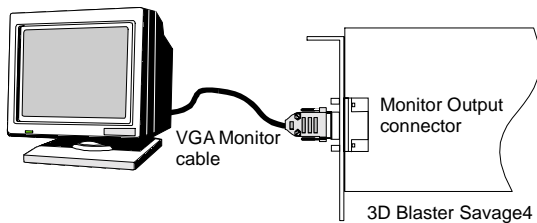9. Secure the card to the computer case with a screw.
10. Replace the computer cover.

AGP slot

PCI slot

ISA slot

b. Secure the card to the slot with a screw.

a. Gently and evenly press the card's bus connector into the slot.
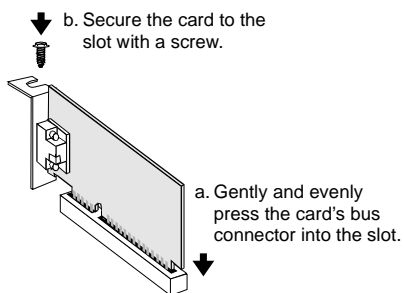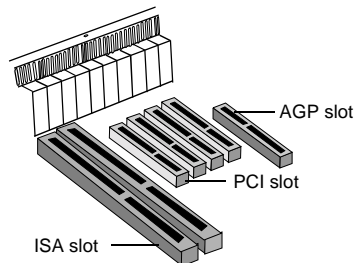
11.Connect the monitor cable to the VGA Out connector of 3D Blaster Savage4.

VGA monitor

VGA Monitor cable

Monitor Output connector

3D Blaster Savage4

If you are using a multi-frequency monitor, you may need a special 15-pin PS/2-compatible adapter cable. If your multi-frequency monitor allows you to switch between *TTL* and *analog* operation modes, set the switch to *analog*. For details, refer to your monitor's manual.

Installing Software

After installing the graphics card, you can install the software. The 3D Blaster Savage4 CD contains the following:

❑ Drivers for Windows 95/98 (common to both)

❑ Drivers for Windows NT 4.0

❑ Creative Enhanced BlasterControl for Windows 95/98 and Windows NT 4.0

❑ Creative SoftMPEG for Windows 95/98

❑ S3 METAL drivers

❑ OpenGL ICD driver for Windows 95/98 and Windows NT 4.0

❑ Colorific™ for Windows 95/98

❑ 3Deep™ for Windows 95/98

To install in Windows 95 (Retail version)

PCI version of the graphics card only.

1. Turn on the power to your computer. Windows 95 automatically detects the graphics card.

2. When the New Hardware Found dialog appears, select the Driver from Disk Provided by Hardware Manufacturer option.

3. Click the OK button.

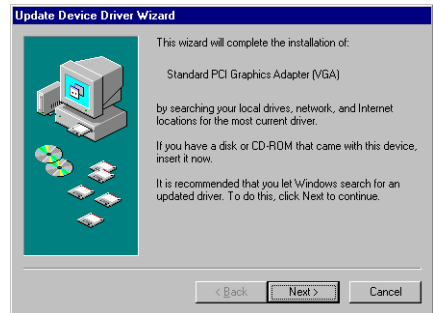4. Insert the 3D Blaster Savage4 CD into your CD-ROM drive.
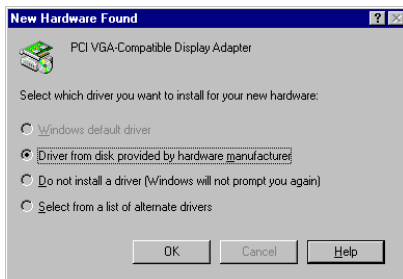
5. In the Install From Disk dialog, type **D:\WINDOWS** (D: represents your CD-ROM drive) and click the OK button.

6. If prompted to select drivers, click the 3D Blaster Savage4 drivers. The drivers are copied to your system.

7. When prompted to restart your system, click the Yes button.

8. After the system has restarted, proceed to install the applications. Click Start on the Taskbar and click on Run.

9. In the Run dialog, type **D:\WINDOWS\SETUP** and click the OK button.

10. Follow the instructions on the screen to complete the setup.
If you do not install all the applications now, you can install them later.

To install in Windows 95 (OSR version 2.1 and later)

If you are installing the AGP version, install the USB supplement to Windows 95, if not included, before installing the graphics card.

1. Turn on the power to your computer. Windows 95 automatically detects the graphics card.

2. When the New Hardware Found dialog appears, click the Next button.

3. Click the Other Locations button when it appears in the Update Device Driver Wizard dialog.

4. Insert the 3D Blaster Savage4 CD into your CD-ROM drive.

5. In the Select Other Location dialog, type **D:\WINDOWS** (D: represents your CD-ROM drive) and click the **OK** button.

6. In the Update Device Driver Wizard dialog, click the Finish button.

7. In the Insert Disk message, click the OK button.

8. In the Copying Files dialog, type **D:\WINDOWS** and click the OK button.

9. In the Update Device Driver Wizard dialog, click the OK button.

10. When prompted to restart your system, click the Yes button.

11. After the system has restarted, proceed to install the applications. Click Start on the Taskbar and click on Run.

12. In the Run dialog, type **D:\WINDOWS\SETUP** and click the OK button.

13. Follow the instructions on the screen to complete the setup.
If you do not install all the applications now, you can install them later.

To install in Windows 98

1. Turn on your computer. Windows 98 automatically detects the graphics card.

2. When the Add New Hardware Wizard message appears, select the option Display a list of all the drivers in a specific location....

3. Click the Next button, a insert the 3D Blaster Savage4 CD into your CD-ROM drive.

4. When a dialog (right) appears, click the Have Disk button.

5. In the Install From Disk dialog, type **D:\WINDOWS** (D: represents your CD-ROM drive) and click OK. If the Savage4 is an additional card using Windows 98's multi-monitor capability, an Update Driver Warning message tells you that the driver you selected may not work correctly. Click Yes to use the selected driver. If you click NO, the computer installs a driver that will not recognize the card correctly (for details, see "Windows 98 Multi-Monitor Display" on page 13).

> If you are installing two or more Savage4 cards, each must be working properly with its corresponding monitor after completing the hardware and driver installation. Repeat this procedure for each subsequent card.

6. In the Select Device dialog, make sure the 3D Blaster Savage4 entry in the Models list is selected and click the OK button.

7. Click the Next button.

8. Click the Finish button. The drivers are copied to your system.

9. When prompted to restart your system, click the Yes button.

10. After the computer restarts, install the applications. Click Start on the Taskbar and click on Run.

11. In the Run dialog, type **D:\WINDOWS\SETUP** and click the OK button.

12. Follow the instructions on the screen to complete the setup.
    If you do not install all the applications now, you can install them later.

To install in Windows NT 4.0 (Service Pack 3 or Later)

1. Click Start on the Taskbar and click on Run.

2. In the Run dialog, type **D:\WINNT40\SETUP** and click the OK button.

3. Follow the instructions on the screen to complete the setup.
   If you do not install all the applications now, you can install them later.

4. If the Invalid Display Settings message appears after your computer restarts, click OK and change the display settings. For details, see "To change display

Changing Settings

To change display settings in Windows NT 4.0

1. Right-click with your mouse pointer on the desktop, and then click Properties on the shortcut menu.
2. In the Display Properties dialog, click the Settings tab.
3. In the Desktop Area group, move the slider to set the desired resolution.
4. In the Color Palette group, select the desired color. Certain colors may not be available for some display resolutions.
5. In the Refresh Frequency group, select the desired refresh rate.
6. To test the settings, click the Test button, and then click the OK button. When the Testing Mode dialog re-appears:
    • If the test bitmap is properly displayed, click the Yes button.
    • If not, click the No button. A warning message is displayed. Click the OK button and repeat steps 3 through 6, changing one or more of the settings.
7. Click the OK button to close the Display Properties dialog.

To change the performance settings in Windows 95/98 and Windows NT 4.0

To change performance settings in Windows 95 and Windows NT 4.0:

1. Right-click your desktop, and then click Properties on the menu that appears.
2. In the Display Properties dialog, click the BlasterControl tab.
3. On the BlasterControl tab page, click the Advanced icon.
4. Select the desired settings and click the OK button.
    To see a brief description of an option or check box in the BlasterControl Advanced module, right-click the item, and then click What's This.
    For details on changing the settings, refer to "Configuring Advanced Settings" in the Help file for 3D Blaster Savage4.

    You can customize the settings of your graphics card for optimal performance with applications. However, if your monitor display exhibits pixel drop (that is, pixels, usually white in color, appear on the screen) or any other abnormal behavior, revert to the factory default settings (see page 14 under Other Display Problems).

To change performance settings in Windows 98

1. Right-click your desktop, and then click Properties on the menu that appears.
2. In the Display Properties dialog, click the Settings tab.
3. On the Settings tab page, click the Advanced button.
4. In the Advanced Properties dialog, click the BlasterControl tab.
5. Select the desired settings and click the OK button.
    To see a brief description of an option or check box in the BlasterControl Advanced module, right-click the item, and then click What's This.

About Sonnetech Colorific®/3Deep

Colorific

Colorific color software is the industry-standard for monitor-to-monitor and monitor-to-printer color management. It gives accurate, predictable color-matching between your screen and printer or over the Internet by calibrating the colors on your monitor. The software asks you a series of simple questions about what you see on your screen. From this information, Colorific builds a precise description of how your monitor displays color, taking into account variable viewing conditions, monitor control settings, and video card adjustments.

For more information about getting accurate color when shopping on the web, please go to htt[://ww.trueinternetcolor.com.

Running Colorific

Calibrate your monitor with Colorific before doing critical color work and whenever you change monitor color settings.

❑ If your monitor has a color temperature control, adjust it to 6500 K to get the best results.

❑ When printing to an inkjet printer, it is best to use special coated paper.

To run Colorific in Windows 95/98:

1. Click the Colorific Control Panel icon in the taskbar.
2. On the Display Properties dialog, click the Colorific tab.
3. Click the Run Color Wizard button. The Colorific Color Wizard is opened.
4. Follow the instructions on the screen to complete the process.

3Deep

3Deep is an exciting new Windows 95/98 tool that allows gamers to experience 3D games as they were intended. Only 3Deep can provide accurate 3D lighting and shading for 3D games because it enables games to tell the system how they want to be displayed, and then adjusts your monitor to match the game creator's vision.

Be sure to click the "Default System Gamma: or "Set Game Gamma" button before playing your favorite titles.

3Deep uses Sonnetech's Color Wizard (the industry standard for monitor calibration) to measure the unique characteristics of each gamer's display. No more dark games, and no more washed out games when you increase the contrast of your monitor. The results are awesome 3D lighting and shading effects. 3Deep is a consistent and high-quality solution for improving the 3D effects of your games.

Using 3Deep

To use 3Deep to measure how your monitor is displaying color:

1. Click Start on the Windows Taskbar, select Settings, and click on Control Panel.
2. In the Control Panel window, double-click the 3Deep icon.

3. On the 3Deep Control Panel, click the Calibrate or Color Wizard button (if you have already run the Color Wizard for Colorific, you do not need to do so for 3Deep.)

You can also display the 3Deep Control Panel by doing the following:

1. Right-click your desktop, and then click Properties on the shortcut menu.
2. In the Display Properties dialog, click the 3Deep tab.

To uninstall Colorific and 3Deep in Windows 95/98

1. Right-click the Colorific Control Panel icon in the taskbar.
2. On the menu that appears, click Exit.
3. Click Start on the Windows Taskbar, select Settings, and click on Control Panel.
4. In the Control Panel window, double-click the Add/Remove Programs icon. The Add/Remove Programs Properties dialog appears with the Install/Uninstall tab page displayed.
5. Select the entry Colorific For Windows from the list, and then click the Add/Remove button.
6. After Colorific For Windows is removed, select the 3Deep entry from the list, and then click the Add/Remove button.

Getting More Information

For 3D Blaster Savage4

The Help file for 3D Blaster Savage4 gives a brief introduction to the features supported by your graphics card.

To open the Help file BCSAV4.HLP:

1. Click Start on the Windows Taskbar, select Programs, select Creative, select 3D Blaster Savage4, and click on 3D Blaster Savage4 Help.

For Creative BlasterControl

The Help file for Creative BlasterControl shows you how to use the BlasterControl utility to customize your screen resolution, color depth, and refresh rate in Windows 95, Windows 98, and Windows NT 4.0.

To open the Help file BLSTCTRL.HLP:

1. Click Start on the Windows Taskbar, select Programs, select Creative, and click on BlasterControl Help.

For Help topics specific to a BlasterControl module:

1. In the BlasterControl module you want, click the Help button.

For Creative SoftMPEG

The Help file for Creative SoftMPEG shows you how to use SoftMPEG to play Video CDs and MPEG files.

To open the Help file CTVCDPLY.HLP:

1. In Creative SoftMPEG, right-click the Video window and click Help on the menu that appears.

For Colorific and 3Deep

The Help file for Colorific contains the *User's Manual*.

To open the Help file for Colorific:

1. Click Start on the Windows Taskbar, select Programs, and click on Colorific. The Colorific calibration utility is opened.
2. On the right-hand corner of the menu bar, click Help.
3. On the Help menu, click Help Contents.

> You can also print a copy of the *User's Manual*, MANUAL.RTF, found in the Documents folder on the installation disk.

To open the Help file for 3Deep:

1. Click Start on the Windows Taskbar, select Settings, click on Control Panel.
2. In the Control Panel window, double-click the 3Deep icon.
3. On the 3Deep Control Panel, click the Help button.

Technical Support

Updated information about using Colorific and 3Deep can be obtained from Sonnetech's Web site at **www.sonnetech.com/tech-support**. Alternatively, you can call Sonnetech's 24-hour fax-on-demand system at (415) 957-9941 with a fax phone. If you cannot find the information you need from these sources or in the program's Help screens, send an e-mail message to **info@colorific.com**.

Technical Specifications

Architecture Highlights

- ❏ 128-bit S3 Savage4 PRO graphics accelerator (for 32 MB version)
- ❏ AGP 2X with sideband addressing support (for 3D Blaster Savage4 AGP)
- ❏ 32 MB of SDRAM
- ❏ 300 MHz RAMDAC
- ❏ S3 texture compression (S3TC)

3D Features

- ❏ Hardware triangle setup engine
- ❏ Dual texture pipelines capable of processing two textures onto one pixel per clock
- ❏ Single-pass multiple textures enable spectacular visual effects such as bump maps, environmental maps, light maps, and reflection maps
- ❏ 125 million pixels/second sustains, trilinear filtered
- ❏ Compatible with DirectX 6.0
- ❏ Point, bilinear, trilinear, and anisotropic filtering, with support for mipmapping
- ❏ Specular lighting and diffuse shading
- ❏ 16-, 24-, or 32-bit Z-buffering
- ❏ DirectX 6 texture compression (S3TC)
- ❏ Full-scene anti-aliasing
- ❏ 32-bit true color rendering

2D Features

- ❏ 100% compatible VGA core
- ❏ VBE 2.0 compatible
- ❏ 128-bit GUI engine accelerates Windows GDI functions
- ❏ Pipeline accelerates 8-, 16-, and 32-bit per pixel modes

Video Features

- ❏ Supports multiple video windows
- ❏ Hardware color space conversion (YUV 4:2:2 and 4:2:0)
- ❏ Multitap bilinear filter maintains image quality when resizing video
- ❏ De-interlacing using Bob-and-Weave de-interlacing
- ❏ VMI video port for external DVD, video capture, or TV tuner cards

Card Specifications

❑ AGP 2X with sideband addressing support
❑ VGA
❑ VMI video port
❑ PC99 rev 1.0 compliant
❑ VESA DDC2B compatible

PCI 2.1 Compliant (for Savage4 PCI)

❑ Full support for PCI system bus, with the ease of Plug and Play installation

AGP 1.0 Compliant (for Savage4 AGP)

❑ Optimized support for sideband addressing, with the ease of Plug and Play installation

Addressing and Interrupts

❑ Plug and Play configurable I/O addresses and interrupts

Software

❑ Windows 95, Windows 98 and Windows NT 4.0 display drivers
❑ OpenGL, DirectDraw, and Direct3D drivers
❑ VBE 2.0 compliant

Utilities

❑ Creative Enhanced BlasterControl
❑ Creative SoftMPEG
❑ Sonnetech Colorific/3Deep

Resolutions and Refresh Rates Supported

Refresh Rates (Hz)	Number of colors		
Resolution	256 (8 bpp)	64 K (16 bpp)	16.7 M (32 bpp)
640x480	60-150	60-150	60-150
800x600	56-150	56-150	56-150
1024x768	60-120	60-120	60-120
1152x864	60-100	60-100	60-100
1280x1024	60-85	60-85	60-85
1600x1200	60-85	60-85	60-85
1920x1440	60	60	--

• The refresh rates shown in the table are the highest obtainable and are monitor-dependent. Resolutions, pixel depths, and refresh rates are also dependent on the driver and the amount of memory available on your Savage4 board. Therefore, some of them may not be available for certain applications or operating systems.

Troubleshooting

System Hangs, Blank Screen, or Corrupted Display

After installing 3D Blaster Savage4 and starting your system, the monitor displays a blank screen.

Solutions   Try the following:

- ❑ Turn off the power to your computer and wait several seconds before switching it on again.
- ❑ Verify that any built-in VGA on your motherboard is disabled and that you have removed all other video display card from your system.
- ❑ Ensure that your 3D Blaster Savage4 card's bus connector is fully seated in the expansion slot—press it firmly into the slot.
- ❑ Check your monitor's VGA Input connector pins—they must not be bent—and that the connector is properly connected to the VGA Out connector of 3D Blaster Savage4.

Windows 98 Multi-Monitor Display

The monitor connected to the second or successive Savage4 card remains blank even though the card and its drivers have been installed.

Cause   If Savage4's drivers are not specified during the software installation (see "When a dialog (right) appears, click the Have Disk button." on page 6), the system installs the second or successive Savage4 card as a VGA card that does *not* support Windows 98's multi-monitor feature.

Solution   Update the device drivers to Savage4's drivers:

1. Right-click with your mouse pointer on the desktop, and then click Properties on the shortcut menu.
2. In the Display Properties dialog, click the Settings tab.
3. On the Settings tab page, click the Advanced Properties button.
4. In the Advanced Display Properties dialog, click the Change button.
5. In the Select Device dialog, click the Have Disk button.
6. Insert the 3D Blaster Savage4 CD into your CD-ROM drive.
7. Follow steps 6 through 13 of the procedure in "When a dialog (right) appears, click the Have Disk button." on page 6 to complete the update.

Other Display Problems

Monitor display flickers after Windows 95 or Windows 98 starts.

Cause   Your monitor may not support the resolution or refresh rate that you have set.

> For the resolutions supported by your monitor, refer to its manual.

Solution   Use display settings supported by the monitor.
To change the display settings:

1. Restart your system in Windows 95/98 Safe mode:
   a. Restart your system; when the message "Starting Windows 95..." or "Starting Windows 98..." appears, press the F8 key.
   b. Select the Safe Mode option and press the ENTER key.
2. After your computer restarts, right-click the desktop and click Properties.
3. In the Display Properties dialog, click the Settings tab.
4. Try the following:
   ❑ Select the correct monitor is selected. To verify, click the Change Display Type button or the Advanced Properties button on the Settings tab page.
   ❑ Use a lower refresh rate or the adapter's default. For details, refer to "Using BlasterControl Monitor Settings" in the BlasterControl Help file.

   To display the refresh rate box:
   Right click the Desktop. Select Properties, click on the Settings tab, click the Advanced button, and select the Adapter tab.
   ❑ Lower your monitor's resolution. Adjust the color depth and desktop area on the Settings tab page.

Monitor display exhibits pixel drop (that is, pixels, usually white in color, appear on the screen) or other abnormal behavior.

Cause   The settings for your graphics card may be incompatible with one or more games or applications that you are running.

Solution   Use the factory default settings:

1. Right-click your desktop, and then click Properties on the shortcut menu.
2. In the Display Properties dialog, click the BlasterControl tab.
3. On the BlasterControl tab page, click the Advanced icon.
4. Click the Factory Default button.

Beeping Sounds During System Startup

When the system starts up, there is a series of prolonged beeps.

Cause   Your 3D Blaster Savage4 card may not be firmly inserted into the expansion slot.

Solution   Ensure that the bus connector of the graphics card is fully inserted into the expansion slot—press the card firmly into the slot. You can also try removing the card and re-inserting it.

Installing Software

In Windows 95/98, the installation program for BlasterControl and SoftMPEG does not run automatically after the installation CD is inserted into your drive.

Cause   The AutoPlay feature in your Windows 95 or Windows 98 system is not enabled.

Solution   To install the software from the CD:

1. Double-click the My Computer icon on your Windows 95 or Windows 98 desktop.
2. In the My Computer window, double-click the Creative Savage4 icon. If the installation program does not run, double-click the Win95/Win98 folder icon followed by the Setup icon.
3. Follow the instructions on the screen to complete the installation.

PCI Bridge (in Windows 95 OSR2)

After installing Savage4 (AGP) onto a Pentium II LX system or any other AGP system, the Resources tab page of the Savage4 Properties dialog in Windows 95 shows resource conflicts similar to the following:

Memory Range used FEDC0000 - FEDDFFFF used by PCI standard PCI-to-PCI bridge.
Memory Range used FD800000 - FDFFFFFF used by PCI standard PCI-to-PCI bridge.
Memory Range used FE000000 - FE7FFFFF used by PCI standard PCI-to-PCI bridge.

Cause   The "PCI standard PCI-to-PCI bridge" is the CPU chipset to AGP controller, which Windows 95 cannot identify properly.

Solution   No action required. A conflict between the AGP video controller and the "PCI standard PCI-to-PCI bridge" in the Windows 95 Device Manager does not affect the functionality of the AGP card within Windows 95. This problem is common to all AGP graphics cards and does not affect Savage4's functionality. It has been resolved in Windows 98.

Using Software

When you restart Windows, one of the following error messages appears:

❑ "BlasterControl will only work on Creative graphics product drivers.
   Do you want BlasterControl to be loaded the next time you start Windows?"
❑ "BlasterControl will only work on Creative graphics product drivers."

Cause   3D Blaster Savage4 drivers, required by BlasterControl, may have been
             replaced by other drivers when you installed DirectX applications.

Solution   Re-install or revert to the 3D Blaster Savage4 drivers:

             1. Right-click your desktop, and click Properties on the menu.

             2. In the Display Properties dialog, click the Settings tab, and then
                click Change Display Type or Advanced Properties.

             3. In the Adapter Type group or the Adapter tab page, click Change.

             4. In the Select Device dialog, click 3D Blaster Savage4, and then
                click the OK button.

             5. On the Insert Disk message, click OK without inserting any CD.

             6. If 3D Blaster Savage4 drivers and later versions of DirectX drivers
                are already installed, click the Skip File button until the Adapter
                Type group or the Adapter tab page appears.

             7. Click the two Close buttons to close the Display Properties dialog.

             8. When prompted to restart your system, click the Yes button.
                After you have restarted your system, the newer DirectX drivers
                will work with the latest 3D Blaster Savage4 drivers.

AGP Aperture Size (AGP Only)

DirectDraw/Direct3D fails to use hardware acceleration (HAL).

Cause   The CMOS setting for the AGP Aperture size is less than 8 MB.

             Changing settings in CMOS incorrectly can cause the system
             to stop functioning.

Solution   Set the AGP Aperture size to 8 MB or more:

             1. Restart your computer.

             2. During the memory check, press the DELETE key. The CMOS
                setup menu appears.

Some of the steps from step 3 onwards may not apply to your system's
CMOS. Refer to your system's CMOS documentation for more details.

             3. Select Chipset Features Setup and press the ENTER key.

             4. Set your AGP Aperture Size (MB) to 8 MB or more.

             5. Press the ESC (Escape) key to return to the CMOS setup menu.

             6. Select Save & Exit Setup, and then press the ENTER key.

             7. Press the Y key and then press the ENTER key.